Sing.

MSU Practitioner's Dog

PATENT

Preliminary Classification:

Proposed Class:

NOTE: "All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand corner of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129.' " M.P.E.P. § 601, 7th ed.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box Patent Application Assistant Commissioner for Patents Washington, D.C. 20231

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Thomas J. Pinnavaia, Wenzhong Zhang and Yu Liu

WARNING: 37 C.F.R. § 1.41(a)(1) points out:

"(a) A patent is applied for in the name or names of the actual inventor or inventors.

"(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.63, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(i) is filed supplying or changing the name or names of the inventor or inventors."
ULTRASTABLE POROUS ALUMINOSILICATE STRUCTURES

For (title):

AND COMPOSITIONS DERIVED THEREFROM

CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10*

(When using Express Mail, the Express Mail label number is mandatory: Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

🕱 deposited with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

37 C.F.R. § 1.8(a)

37 C.F.R. § 1.10 *

with sufficient postage as first class mail.

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Mailing Label No. ET678042438US (mandatory)

TRANSMISSION

☐ facsimile transmitted to the Patent and Trademark Office, (703

Date: 12/19/01

Tammi L. Taylor

(type or print name of person certifying)

(New Application Transmittal [4-1]—page 1 of 14)

^{*} Only the date of filing (§ 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under § 1.8 continues to be taken into account in determining timeliness. See § 1.703(f). Consider "Express Mail Post Office to Addressee" (§ 1.10) or facsimile transmission (§ 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

	1.	Type	of	Application
--	----	------	----	-------------

This new application is for a(n)

(check one applicable item below)

(
☑ Original (nonprovisional)
☐ Design
☐ Plant
WARNING: Do not use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. § 371(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in-part application.
WARNING: Do not use this transmittal for the filing of a provisional application.
NOTE: If one of the following 3 items apply, then complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT APPLICATION OF THE FILING OF THIS CONTINUATION APPLICATION.
☐ Divisional.
☐ Continuation.
☑ Continuation-in-part (C-I-P).
Papafit of Prior II.S. Application(s) (35 II.S.C. && 119(s), 120, or 121)

Benefit of Prior U.S. Application(s) (35 U.S.C. 99 119(e), 120, or 121)

NOTE: A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. § 112. Each prior application must also be:

- (i) An international application entitled to a filing date in accordance with PCT Article 11 and designating the United States of America; or
 - (ii) Complete as set forth in § 1.51(b); or
- (iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or
- (iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee set forth in § 1.21(I) within the time period set forth in § 1.53(f).

37 C.F.R. § 1.78(a)(1).

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICA-TION(S) CLAIMED.

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. §§ 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. §§ 120, 121 or 365(c). (35 U.S.C. § 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. §§ 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

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(2) Except for a continued prosecution application filed under § 1.53(d), any nonprovisional application claiming the benefit of one or more prior filed copending nonprovisional applications or international applications designating the United States of America must contain a reference to each such prior application, identifying it by application number (consisting of the series code and serial number) or international application number and international filing date and indicating the relationship of the applications. This reference must be submitted during the pendency of the application, and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. This time period is not extendable. Unless the reference required by this paragraph is included in an application data sheet (§ 1.76), the specification must contain or be amended to contain such reference in the first sentence following the title. If the application claims the benefit of an international application, the first sentence of the specification must include an indication of whether the international application was published under PCT Article 21(2) in English (regardless of whether benefit for such application is claimed in the application data sheet). The request for a continued prosecution application under § 1.53(d) is the specific reference required by 35 U.S.C. 120 to the prior application. The identification of an application by application number under this section is the specific reference required by 35 U.S.C. 120 to every application assigned that application number. Cross references to other related applications may be made when appropriate (see § 1.14). Except as provided in paragraph (a)(3) of this section, the failure to timely submit the reference required by 35 U.S.C. 120 and this paragraph is considered a waiver of any benefit under 35 U.S.C. 120, 121, or 365(c) to such prior application. The time period set forth in this paragraph does not apply to an application for a design patent." Emphasis added

- The new application being transmitted claims the benefit of prior U.S. application(s). Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.
- 3. Papers Enclosed
 - A. Required for filing date under 37 C.F.R. § 1.53(b) (Regular) or 37 C.F.R. § 1.153 (Design) Application
 - _116Pages of specification
 - 27 Pages of claims
 - 51 Sheets of drawing
 - WARNING: DO NOT submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. For comments on proposed then-new 37 C.F.R. § 1.84, see Notice of March 9, 1988 (1990 O.G. 57-62).
 - NOTE: "Identifying indicia, if provided, should include the application number or the title of the invention, inventor's name, docket number (if any), and the name and telephone number of a person to call if the Office is unable to match the drawings to the proper application. This information should be placed on the back of each sheet of drawing a minimum distance of 1.5 cm. (% inch) down from the top of the page . . ." 37 C.F.R. § 1.84(c)).

(complete the following, if applicable)

The enclosed drawing(s)	are photograph(s).
	(New Application Transmittal I4-11-page 3 of 14)

NOTE: 37 C.F.R. 1.84

"(b) Photographs.

"(1) Black and white. Photographs, including photocopies of photographs, are not ordinarily permitted in utility and design patent applications. The Office will accept photographs in utility and design patent applications, however, if photographs are the only practicable medium for illustrating the claimed invention. For example, photographs or photomicrographs of: electrophoresis gels, blots (e.g., immunological, western, Southern, and northern), auto radiographs, cell cultures (stained and unstained), histological tissue cross sections (stained and unstained), animals, plants, in vivo imaging, thin layer chromatography plates, crystalline structures, and, in a design patent application, ornamental effects, are acceptable. If the subject matter of the application admits of illustration by a drawing, the examiner may require a drawing in place of the photograph. The photographs must be of sufficient quality so that all details in the photographs are reproducible in the printed patent.

"(2) Color photographs. Color photographs will be accepted in utility and design patent applications if the conditions for accepting color drawings and black and white photographs have been satisfied. See paragraphs (a)(2) and (b)(1) of this section."

☐ The enclosed drawing(s) are in color. Three (3) sets of color drawings and a "PETITION TO ACCEPT COLOR DRAWING(S)" are attached. 37 C.F.R. §§ 1.84(a)(2) and 1.84(b).

NOTE: 37 C.F.R. 1.84(a)

"(2) Color. On rare occasions, color drawings may be necessary as the only practical medium by which to disclose the subject matter sought to be patented in a utility or design patent application or the subject matter of a statutory invention registration. The color drawings must be of sufficient quality such that all details in the drawings are reproducible in black and white in the printed patent. Color drawings are not permitted in international applications (see PCT Rule 11.13), or in an application, or copy thereof, submitted under the Office electronic filling system. The Office will accept color drawings in utility or design patent applications and statutory invention registrations only after granting a petition filed under this paragraph explaining why the color drawings are necessary. Any such petition must include the following:

- (i) The fee set forth in § 1.17(h);
- (ii) Three (3) sets of color drawings;
- (iii) A black and white photocopy that accurately depicts, to the extent possible, the subject matter shown in the color drawing; and
- (iv) An amendment to the specification to insert (unless the specification contains or has been previously amended to contain) the following language as the first paragraph of the brief description of the drawings:

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee."

			for	mal
		X	info	ormal
ı	В.	Oth	ner P	apers Enclosed
		_1	<u>0</u> Pa	ages of declaration and power of attorney
			<u>1</u> Pa	ages of abstract
			_0	ther
4.	Α	dditi	onal	papers enclosed
			Am	endment to claims
				Cancel in this applications claims before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)
				Add the claims shown on the attached amendment. (Claims added have been numbered consecutively following the highest numbered original claims.)

5.

] Pr	eliminary Amendment
5	d Inf	formation Disclosure Statement (37 C.F.R. § 1.98)
2	§ Fo	m PTO-1449 (PTO/SB/08A and 08B)
5	d Ci	tations
	_	eclaration of Biological Deposit
] Su pe	bmission of "Sequence Listing," computer readable copy and/or amendment rtaining thereto for biotechnology invention containing nucleotide and/or nino acid sequence.
] Au tive	thorization of Attorney(s) to Accept and Follow Instructions from Representa- e
] Sp	ecial Comments
	Ot	her
. Dec	laratio	on or oath (including power of attorney)
NOTE:	the pri by all applica- the sign by a sign being declara- person	If y executed declaration is not required in a continuation or divisional application provided that ior nonprovisional application contained a declaration as required, the application being filed is or fewer than all the inventors named in the prior application, there is no new matter in the ation being filed, and a copy of the executed declaration filed in the prior application (showing mature or an indication thereon that it was signed) is submitted. The copy must be accompanied tatement requesting deletion of the names of person(s) who are not inventors of the application filed. If the declaration in the prior application was filed under § 1.47, then a copy of that ation must be filed accompanied by a copy of the decision granting § 1.47 status or, if a nonsigning a under § 1.47 has subsequently joined in a prior application, then a copy of the subsequently ted declaration must be filed. See 37 C.F.R. §§ 1.63(d)(1)–(3).
NOTE:	is direc abbrec countr	laration filed to complete an application must be executed, identify the specification to which it cted, identify each inventor by full name including family name and at least one given name, without viation together with any other given name or initial, and the residence, post office address and y or citizenship of each inventor, and state whether the inventor is a sole or joint inventor. 37 § 1.63(a)(1)-(4).
NOTE:	as pre as pre is that this pa	nventorship of a nonprovisional application is that inventorship set forth in the oath or declaration scribed by § 1.62, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration scribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under aragraph accompanied by the fee set forth in § 1.17(i) is filed supplying or changing the name mes of the inventor or inventors." 37 C.F.R. § 1.41(a)(1).
. 🔯] En	closed
	Ex	ecuted by
		(check all applicable boxes)
	X	inventor(s). (Thomas J. Pinnavaia and Yi Liu)
		legal representative of inventor(s). 37 C.F.R. §§ 1.42 or 1.43.
		joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.
		☐ This is the petition required by 37 C.F.R. § 1.47 and the statement required by 37 C.F.R. § 1.47 is also attached. See item 13 below for fee.
] No	t Enclosed.
NOTE:	the U. may b	the filing is a completion in the U.S. of an International Application or where the completion of S. application contains subject matter in addition to the International Application, the application e treated as a continuation or continuation-in-part, as the case may be, utilizing ADDED PAGE NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION CLAIMED.

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		Application is made by a person authorized under 37 C.F.R. § 1.41(c) on behalf of all the above named inventor(s).	
(The d	eclar	ration or oath, along with the surcharge required by 37 C.F.R. § 1.16(e) can be filed subsequently).	
		☐ Showing that the filing is authorized. (not required unless called into question. 37 C.F.R. § 1.41(d))	
6. Invent	torsh	ip Statement	
WARNING	ov	the named inventors are each not the inventors of all the claims an explanation, including the vnership of the various claims at the time the last claimed invention was made, should be ibmitted.	
The inv	ento	rship for all the claims in this application are:	
X	The	e same.	
		or	
		the same. An explanation, including the ownership of the various claims at time the last claimed invention was made,	
		is submitted.	
		will be submitted.	
7. Langu	age		
A re	n Eng equire	dication including a signed oath or declaration may be filed in a language other than English. It is translation of the non-English language application and the processing fee of \$130.00 d by 37 C.F.R. § 1.17(k) is required to be filed with the application, or within such time as may by the Office. 37 C.F.R. § 1.52(d).	
X	Eng	alish	
	Nor	n-English	
		The attached translation includes a statement that the translation is accurate. 37 C.F.R. § 1.52(d).	
B. Assign	nmer	Board of Trustees operating	
X	An	assignment of the invention to Michigan State University	
		st Lansing, Michigan 48824	
		is attached. A separate ☐ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☐ FORM PTO 1595 is also attached.	
	X	will follow.	
		ssignment is submitted with a new application, send two separate letters-one for the application e for the assignment." Notice of May 4, 1990 (1114 O.G. 77-78).	
WARNING		newly executed "CERTIFICATE UNDER 37 C.F.R. § 3.73(b)" must be filed when a continuation-part application is filed by an assignee. Notice of April 30, 1993, 1150 O.G. 62-64.	
	This	s is a continuation divisional application and the assignment	
٠	doc	cument for the parent application 0 / was filed	
•	on .		
		Reel	
		Frame	

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9. Certified Copy					
Certified copy(ies) of applic	cation(s)				
Country		Appln. N	о.		Filed
Country		Appln. N	0.		Filed
Country		Appln. No	0.		· Filed
from which priority is claimed	ı				
☐ is (are) attached.					
☐ will follow.					
NOTE: The foreign application for declaration. 37 C.F.R. § 1			aim fo	r priority must	be referred to in the oath o
U.S. application or Internat § 120 is itself entitled to p	tional Appli riority from	ication from wh a prior foreign	ich thi applic	's application cl ation, then con	directly relates. If any paren aims benefit under 35 U.S.C aplete item 18 on the ADDEL PRIOR U.S. APPLICATION(S
10. Fee Calculation (37 C.F	F.R. § 1.	16)			
A. X Regular application	1		-		
	CL	AIMS AS F	ILED		
Number filed	No	umber Extra	1	Rate	Basic Fee 37 C.F.R. § 1.16(a) \$740.00
Total					
Claims (37 C.F.R.					
	20 =	63	<u>×</u> _	\$ 18.00	1134.00
Independent Claims (37 C.F.R.					
§ 1.16(b)) 18 -	3 =	15	×	\$ 84.00	1260.00
Multiple dependent claim(s), if any (37 C.F.R. § 1.16(d))			+	\$280.00	280.00
☐ Amendment cance	lling extr	a claims is	enclo	sed.	
Amendment deletir	ng multip	ole-depende	ncies	is enclosed	l.
☐ Fee for extra claim	s is not	being paid	at thi	is time.	
NOTE: If the fees for extra claims a prior to the expiration of the notice of fee deficiency. 3	he time pe	riod set for res			ms cancelled by amendment and Trademark Office in an
	Filing Fe	e Calculatio	n		\$ 3414.00
B. Design application (\$330.00—37 C.F.F.	R. § 1.16	S(f))			
		e Calculatio	n		\$

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(\$510.00—37 C.F.R. § 1.16(g))	
Filing fee calculation \$	

11. Assertion of Small Entity Status

Applicant hereby asserts status as a small entity under 37 C.F.R. § 1.27

NOTE: 37 C.F.R. § 1.27(c) deals with the assertion of small entity status, whether by a written specific declaration thereof or by payment as a small entity of the basic filing fee or the fee for the entry into the national phase and states:

"(c) Assertion of small entity status. Any party (person, small business concern or nonprofit organization) should make a determination, pursuant to paragraph (f) of this section, of entitlement to be accorded small entity status based on the definitions set forth in paragraph (a) of this section, and must, in order to establish small entity status for the purpose of paying small entity fees, actually make an assertion of entitlement to small entity status, in the manner set forth in paragraphs (c)(1) or (c)(3) of this section, in the application or patent in which such small entity fees are to be paid.

- (1) Assertion by writing. Small entity status may be established by a written assertion of entitlement to small entity status. A written assertion must:
 - (i) Be clearly identifiable:
 - (ii) Be signed (see paragraph (c)(2) of this section); and
 - (iii) Convey the concept of entitlement to small entity status, such as by stating that applicant is a small entity, or that small entity status is entitled to be asserted for the application or patent. While no specific words or wording are required to assert small entity status, the intent to assert small entity status must be clearly indicated in order to comply with the assertion requirement.
- (2) Parties who can sign and file the written assertion. The written assertion can be signed by:
 - (i) One of the parties identified in § 1.33(b) (e.g., an attorney or agent registered with the Office), § 3.73(b) of this chapter notwithstanding, who can also file the written assertion;
 - (ii) At least one of the individuals identified as an inventor (even though a § 1.63 executed oath or declaration has not been submitted), notwithstanding § 1.33(b)(4), who can also file the written assertion pursuant to the exception under § 1.33(b) of this part; or
 - (iii) An assignee of an undivided part interest, notwithstanding §§ 1.33(b)(3) and 3.73(b) of this chapter, but the partial assignee cannot file the assertion without resort to a party identified under § 1.33(b) of this part.
- (3) Assertion by payment of the small entity basic filing or basic national fee. The payment, by any party, of the exact amount of one of the small entity basic filing fees set forth in §§ 1.16(a), (f), (g), (h), or (k), or one of the small entity basic national fees set forth in §§ 1.492(a)(1), (a)(2), (a)(3), (a)(4), or (a)(5), will be treated as a written assertion of entitlement to small entity status even if the type of basic filing or basic national fee is inadvertently selected in error.
 - (i) If the Office accords small entity status based on payment of a small entity basic filing or basic national fee under paragraph (c)(3) of this section that is not applicable to that application, any balance of the small entity fee that is applicable to that application will be due along with the appropriate surcharge set forth in § 1.16(e), or § 1.16(l).
 - (ii) The payment of any small entity fee other than those set forth in paragraph (c)(3) of this section (whether in the exact fee amount or not) will not be treated as a written assertion of entitlement to small entity status and will not be sufficient to establish small entity status in an application or a patent."

WARNING:	37 C.F.R. § 1.27(c)(4): "Assertion required in related, continuing, and reissue applications. Status as a small entity must be specifically established by an assertion in each related, continuing and reissue application in which status is appropriate and desired. Status as a small entity in one application or patent does not affect the status of any other application or patent, regardless of the relationship of the applications or patents. The refiling of an application under § 1.53 as a continuation, divisional, or continuation-in-part application (including a continued prosecution application under § 1.53(d)), or the filing of a reissue application, requires a new assertion as to continued entitlement to small entity status for the continuing or reissue application."
WADNING.	"Small antity status must not be patablished when the person or person signing the

WARNING: "Small entity status must not be established when the person or persons signing the statement can unequivocally make the required self-certification." M.P.E.P., § 509.03 (emphasis added).
(complete the following, if applicable)
☐ Status as a small entity was asserted in the prior application
is being claimed for this application under:
35 U.S.C. §
and which status as a small entity is still proper and asserted for this application.
A copy of the written assertion of small entity filed in the prior application is included.
NOTE: A refund based on establishment of small entity status, of a portion of fees timely paid in full prior to establishing status as a small entity may only be obtained if an assertion under § 1.27(c) and a request for a refund of the excess amount are filed within three months of the date of the timely payment of the full fee. The three-month time period is not extendable under § 1.136. 37 C.F.R. § 1.28(a).
Filing Fee Calculation (50% of A, B or C above)
\$ <u>1707.00</u>
12. Request for International-Type Search (37 C.F.R. § 1.104(d))
(complete, if applicable)
Please prepare an international-type search report for this application at the time when national examination on the merits takes place.

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13. Fe	e Pa	ayment Being Made at This Time	
E	JN	Not Enclosed	
	C	No filing fee is to be paid at this time. (This and the surcharge required by 37 C.F.R. § 1.1 subsequently.)	6(e) can be paid
2	XI E	Enclosed	
	[\$ 1707.00
	[☐ Recording assignment (\$40.00; 37 C.F.R. § 1.21(h)) (See attached "COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION".)	\$
	[☐ Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached (\$130.00; 37 C.F.R. §§ 1.47 and 1.17(i))	\$
	[For processing an application with a specification in a non-English language (\$130.00; 37 C.F.R. §§ 1.52(d) and 1.17(k))	\$
	[□ Processing and retention fee (\$130.00; 37 C.F.R. §§ 1.53(d) and 1.21(l))	\$
	[Fee for international-type search report (\$40.00; 37 C.F.R. § 1.21(e))	\$
NOTE:	failin 37 C eithe	C.F.R. § 1.21(f) establishes a fee for processing and retaining any application of to complete the application pursuant to 37 C.F.R. § 1.53(f) and this, as of C.F.R. §§ 1.53 and 1.78(a)(1), indicate that in order to obtain the benefit of a er the basic filing fee must be paid, or the processing and retention fee of § in 1 year from notification under § 53(f).	well as the changes to prior U.S. application,
		Total fees enclosed \$_	1707.00
14. Me		d of Payment of Fees	
[2	X A	attached is a 🛭 check 📋 money order in the amount of \$ _	1707.00
	3 A	authorization is hereby made to charge the amount of \$	
		•	
		to Credit card as shown on the attached credit card infol tion form PTO-2038.	mation authoriza-
WARNI		Credit card information should not be included on this form as it may be	•
Ď.		Charge any additional fees required by this paper or credit in the manner authorized above. to Deposit Accou	
٠.		A duplicate of this paper is attached.	

15. Authorization to Charge Additional Fees

WARNING: If no fees are to be paid on filing, the following items should not be completed.

WARNING: Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized.

- The Office is hereby authorized to charge, in the manner shown above, the following additional fees that may be required by this paper and during the entire pendency of this application.
 - 37 C.F.R. § 1.16(a), (f) or (g) (filing fees)
 - 37 C.F.R. § 1.16(b), (c) and (d) (presentation of extra claims)
- NOTE: Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 C.F.R. § 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.
 - 37 C.F.R. § 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)
 - 37 C.F.R. § 1.17(a)(1)–(5) (extension fees pursuant to § 1.136(a)).
 - ☑ 37 C.F.R. § 1.17 (application processing fees)
- NOTE: ". . . A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3).
 - ☐ 37 C.F.R. § 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b))
- NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. § 1.311(b).
- NOTE: 37 C.F.R. § 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying, . . . the issue fee. . . " From the wording of 37 C.F.R. § 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.

16. Instructions as to Overpayment

NOTE: ". . . Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. § 1.26(a).

X	Credit Account No	13-0610	_
	Refund		

Reg. No. 20,931

Tel. No. (517) 347-4100

Customer No. 21036

SIGNATURE OF PRACTITIONER

Ian C. McLeod

(type or print name of attorney)

2190 Commons Parkway

P.O. Address

Okemos, Michigan 48864

		· · ·
	p s: tl	check the following item if the application in this transmittal claims the benefit of rior U.S. application(s) (including an international application entering the U.S. tage as a continuation, divisional or C-I-P application) and complete and attach the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF TRIOR U.S. APPLICATION(S) CLAIMED)
	X	Plus Added Pages for New Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed
		Number of pages added5
		Plus Added Pages for Papers Referred to in Item 4 Above
		Number of pages added
		Plus added pages deleting names of inventor(s) named in prior application(s) who is/are no longer inventor(s) of the subject matter claimed in this application.
		Number of pages added
•		Plus "Assignment Cover Letter Accompanying New Application"
		Number of pages added
	State	ment Where No Further Pages Added
		no further pages form a part of this Transmittal, then end this Transmittal with is page and check the following item)
		This transmittal ands with this page

☑ Incorporation by reference of added pages

ADDED PAGES FOR APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED

NOTE: See 37 C.F.R. § 1.78.

17. Relate Back

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. §§ 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. §§ 120, 121 or 365(c). (35 U.S.C. § 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. §§ 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

(complete the following, if applicable)

	2	Amend the specification by inserting, before the first line, the following sentence:
A.	35	U.S.C. § 119(e)
M	OTE:	"Any nonprovisional application claiming the benefit of one or more prior filed copending provisional applications must contain or be amended to contain in the first sentence of the specification following the title a more provisional application identifies it as a provisional application

and including the provisional application number (consisting of series code and serial number)." 37 C.F.R. § 1.78(a)(4).

"This application claims the benefit of U.S. Provisional Application(s) No(s).:

APPLICATION NO(S).:	FILING DATE
/	n
/	n
/	n

(Added Pages for Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed [4-1.1] -page 1 of 5)

B. 35	u.s.c. §§	120, 121 and 365(c)	
NOTE:	claiming the applications first sentence it by applications number and	a continued prosecution application filed under § 1.53(d), as benefit of one or more prior filed copending nonprovisions designating the United States of America must contain or see of the specification following the title a reference to each sustation number (consisting of the series code and serial number international filing date and indicating the relationship of to other related applications may be made when appropriate.	al applications or international be amended to contain in the ch prior application, identifying er) or international application the applications Cross-
X	This a	application is a	
	□ со	ntinuation	
	X co	ntinuation-in-part	
	☐ div	risional	
o	of copendi	ng application(s)	
	applica Interna	tion number $0.9/578,315$ 09/792,017, filed 2/21 tional Application	
NOTE:		and which designated th	
	serial numb	reference to a prior filed PCT application that entered the L er and the filing date of the PCT application that designated	d the U.S.
NOTE:	the filing car	he application being transmitted adds subject matter to the n be as a continuation-in-part or (2) if it is desired to do so fo a continuation.	International Application, then or other reasons then the filing
NOTE:	The deadlin in the Notice	e for entering the national phase in the U.S. for an internat e of April 28, 1987 (1079 O.G. 32 to 46) as follows:	ional application was clarified
	month from Preliminary is and until the which electic from the pri to the Pater internationa. 20 or 30 mo States 20 or as paragraph	t and Trademark Office considers the International application the priority date if the United States has been designated an Examination has been filed prior to the expiration of the 19th e 32nd month from the priority date if a Demand for Internated the United States of America has been filed prior to the iority date, provided that a copy of the international applicant and Trademark Office within the 20 or 30 month period of application has not been communicated to the Patent and application has not been communicated to the Patent and onth period respectively, the international application become 30 months from the priority date respectively. These periods the (h) of § 1.494 and paragraph (i) of § 1.495. A continuing apply be filed anytime during the pendency of the international	d no Demand for International in month from the priority date tional Preliminary Examination expiration of the 19th month tion has been communicated respectively. If a copy of the d Trademark Office within the s abandoned as to the United have been placed in the rules lication under 35 U.S.C. 365(c)
	"The no	onprovisional application designated above, nan	nely application
		_/, filed	_, claims the benefit of
	U.S. Pr	ovisional Application(s) No(s).:	
	ATION NO	P(S).:	FILING DATE
			**
			"
			77
(X)	where r	more than one reference is made above, please e sentence.	combine all references

18. Relate Back—35 U.S.C. § 119 Priority Claim for Prior Application

The prior U.S. application(s), including any prior International Application designating the U.S., identified above in item 17B, in turn itself claim(s) foreign priority(ies) as follows:

		Country	Appln. no.	Filed on	_
The	e cer	tified copy(ies) has (l	have)		
		been filed on	• • •	/, which wa	18
		is (are) attached.			
		the International Bureal application in the con application communical U.S. serial number unstage is not entered. If prosecution of a continuous from the folio to request transfer, retreenter and make a recount the priority documents stage may not be relie	a may not be relied on without any not tinuing application. This is so becated by the International Bureau is less the national stage is entered. Surferefore, such certified copies may nuing application. An alternative woo ders and transfer them to the continuieve the folders, make suitable record of such copies in the Continuing As in folders of international application. Notice of April 28, 1987 (107)		ity ity al he ity s, y,
19.	Mai	intenance of Cop	endency of Prior Applica	ation	
NOT	re		papers constituting the filing of th	nior application extending the term to continuation application. Notice	
A.		Extension of time in	prior application		
	(Thi:		pleted and the papers filed in set in the prior application		
		A petition, fee and until	response extends the term in	n the pending prior application	n
		☐ A copy of the	petition filed in prior applica	tion is attached.	
B.		Conditional Petition	for Extension of Time in Pri	ior Application	
		(complete t	his item, if previous item not	t applicable)	
		A conditional petition application.	on for extension of time is b	elng filed in the pending price	or
		☐ A copy of the	conditional petition filed in th	e prior application is attache	d.

(Added Pages for Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed [4-1.1];—page 3 of 5)

20. Further Inventorship Statement Where Benefit of Prior Application(s) Claimed

(complete applicable item (a), (b) and/or (c) below) (a) This application discloses and claims only subject matter disclosed in the prior application whose particulars are set out above and the inventor(s) in this application are ☐ the same. less than those named in the prior application. It is requested that the following inventor(s) identified for the prior application be deleted: (type name(s) of inventor(s) to be deleted) (b)
This application discloses and claims additional disclosure by amendment and a new declaration or oath is being filed. With respect to the prior application, the inventor(s) in this application are the same. the following additional inventor(s) have been added: (type name(s) of inventor(s) to be added) (c) The inventorship for all the claims in this application are X the same. not the same. An explanation, including the ownership of the various claims at the time the last claimed invention was made ☐ is submitted.

□ will be submitted.

21. Abandonment of Prior Application (if applicable)
Please abandon the prior application at a time while the prior application is pending, or when the petition for extension of time or to revive in that application is granted, and when this application is granted a filing date, so as to make this application copending with said prior application.
NOTE: According to the Notice of May 13, 1983 (103, TMOG 6-7), the filing of a continuation or continuation-in- part application is a proper response with respect to a petition for extension of time or a petition to revive and should include the express abandonment of the prior application conditioned upon the granting of the petition and the granting of a filing date to the continuing application.
22. Petition for Suspension of Prosecution for the Time Necessary to File an Amendment
WARNING: "The claims of a new application may be finally rejected in the first Office action in those situations where (A) the new application is a continuing application of, or a substitute for, an earlier application, and (B) all the claims of the new application (1) are drawn to the same invention claimed in the earlier application, and (2) would have been properly finally rejected on the grounds of art of record in the next Office action if they had been entered in the earlier application." M.P.E.P., § 706.07(b), 7th ed.
NOTE: Where it is possible that the claims on file will give rise to a first action final for this continuation application and for some reason an amendment cannot be filed promptly (e.g., experimental data is being gathered) it may be desirable to file a petition for suspension of prosecution for the time necessary.
(check the next item, if applicable)
☐ There is provided herewith a Petition To Suspend Prosecution for the Time Necessary to File An Amendment (New Application Filed Concurrently)
23. Small Entity (37 C.F.R. § 1.28(a))
☐ Applicant has established small entity status by the filing of a statement in parent application / on
☐ A copy of the statement previously filed is included.
WARNING: See 37 C.F.R. § 1.28(a).
WARNING: "Small entity status must not be established when the person or persons signing the statement can unequivocally make the required self-certification." M.P.E.P., § 509.03, 7th ed. (emphasis added).
24. NOTIFICATION IN PARENT APPLICATION OF THIS FILING
☐ A notification of the filing of this (check one of the following)
☐ continuation
☐ continuation-in-part
☐ divisional
is being filed in the parent application, from which this application claims priority under 35 U.S.C. § 120.

(Added Pages for Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed [4-1.1]—page 5 of 5)